

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|--|---|--|
| Applicant's or agent's file reference IP/P7085 WOD | FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | |
| International application No. PCT/GB 03/05445 | International filing date (day/month/year) 12/12/2003 | (Earliest) Priority Date (day/month/year) 17/12/2002 |
| Applicant QINETIQ LIMITED | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :

contained in the international application in written form.

filed together with the international application in computer readable form.

furnished subsequently to this Authority in written form.

furnished subsequently to this Authority in computer readable form.

the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. Certain claims were found unsearchable (See Box I).

3. Unity of invention is lacking (see Box II).

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

ASSESSING OF MITOTIC ACTIVITY BY IMAGE ANALYSIS

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

as suggested by the applicant.

because the applicant failed to suggest a figure.

because this figure better characterizes the invention.

2

None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/05445

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06T7/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06T

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | <p>MADACHY R J ET AL: "Image analysis for automatic classification of mitotic cervical cells" PROCEEDINGS OF THE ANNUAL INTERNATIONAL CONFERENCE OF THE IEEE ENGINEERING IN MEDICINE AND BIOLOGY SOCIETY (IEEE CAT. NO.88CH2566-8) IEEE NEW YORK, NY, USA, 1988, pages 372-374 vol.1, XP010074652 section: "Method" section: "Cell Feature Analysis" section: Cell Classification"</p> <p>-----</p> <p style="text-align: center;">-/-</p> | 1,6,18, 19,21 |

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

12 November 2004

Date of mailing of the international search report

29.03.05

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Gao, M

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/05445

| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|---|-----------------------|
| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | HIBBARD L S ET AL: "MULTISCALE DETECTION AND ANALYSIS OF THE SENILE PLAQUES OF ALZHEIMER'S DISEASE" IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, IEEE INC. NEW YORK, US, vol. 42, no. 12, 1 December 1995 (1995-12-01), pages 1218-1225, XP000556862 ISSN: 0018-9294 section II. A. "SP detection/classification strategy" section II. C. "SP detection by multiscale template correlation" section II. D. "Detected object definition" section II. G. "Classifier features" ----- | 1 |
| Y | ----- | 2-5 |
| Y | DATABASE MEDLINE [Online] US NATIONAL LIBRARY OF MEDICINE (NLM), BETHESDA, MD, US; September 1999 (1999-09), NETSCH T ET AL: "Scale-space signatures for the detection of clustered microcalculations in digital mammograms." XP002301991 Database accession no. NLM10571382 abstract -& IEEE TRANSACTIONS ON MEDICAL IMAGING. SEP 1999, vol. 18, no. 9, September 1999 (1999-09), pages 774-786, XP002302593 ISSN: 0278-0062 section: III.A "Motivation and outline" section: III.B "Laplacian scale-space" section: III.C "Spot detection" ----- | 2-5 |
| A | LINDEBERG T: "FEATURE DETECTION WITH AUTOMATIC SCALE SELECTION" INTERNATIONAL JOURNAL OF COMPUTER VISION, KLUWER ACADEMIC PUBLISHERS, NORWELL, US, vol. 30, no. 2, November 1998 (1998-11), pages 79-116, XP000800306 ISSN: 0920-5691 sections 4-5 ----- | 1-6,18, 19,21 |
| A | J.G. JONES ET AL: "multiresolution analysis of remotely sensed imagery" INTERNATIONAL JOURNAL OF REMOTE SENSING, 1991, pages 107-124, XP008037183 cited in the application section 2 ----- | 1-6,18, 19,21 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 03/05445

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1, 2-6 (when dependent on claim 1), 19, 21 (when dependent on claim 1)

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1, 2-6,18(when dependent on clm 1),19,21(when dependent on clm 1)

Detection of potential regions of interest

2. claims: 7(when dependent on clm 1)-11

contour estimation of the detected objects

3. claims: 12(when dependent on clm 1),13(when dependent on clm 1),14(when dependent on clm 1)-17,18(when dependent on clm 17),19(when dependent on clm 17),20

curvature estimation of the contours
